LIST OF AND AMENDMENTS TO CLIAMS

1. (original) A semiconductor die comprising:

a planar semiconductor member; and

a plurality of conductive pins extending from said semiconductor member in a direction parallel to a plane of said semiconductor member.

2. (original) The semiconductor die of claim 1, wherein said pins extend directly from said semiconductor member.

3. (original) The semiconductor die of claim 1, wherein said semiconductor has a plurality of sides, and wherein said pins extend from at least one of said sides.

4. (original) The semiconductor die of claim 1, wherein said semiconductor has a plurality of sides, and wherein said pins extend from all of said sides.

5. (currently amended) The semiconductor die of claim 1, wherein said pins are micro-pins having a of length of 1 to 1000 microns, a width of 1 to 500 microns and a depth of 1 to 800 microns in the direction into the die ~~20~~.

6. (original) The semiconductor die of claim 1, wherein said semiconductor has a plurality of sides, and wherein said pins extend along said sides in a direction perpendicular to a plane of said semiconductor member.

7. (currently amended) The semiconductor die of claim 6, in combination with at least one additional semiconductor die, said semiconductor dies being disposed one over another so

that respective pins of said semiconductor die are stacked one over another to facilitate electrical contact with one another.

8. (original) The combination of claim 7, wherein said respective pins are diffusion bonded to one another to provide said electrical contact.

9. (original) The combination of claim 7, further comprising an electrically conductive material disposed between said respective pins so as to provide said electrical contact.

10. (original) The combination of claim 7, further comprising a substrate on which said combination is mounted.

11. (original) The combination of claim 10, wherein said substrate is formed of a semiconductor material.

12. (original) The combination of claim 10, further comprising a second substrate, said second substrate being formed of an insulating material.

13. (original) The semiconductor die of claim 1, in combination with at least one other semiconductor die of claim 1, successive ones of said semiconductor dies being assembled with at least one wiring substrate between dies, said at least one wiring substrate providing electrical connections between said dies.

14. (original) The combination of claim 13, wherein said dies and said at least one substrate are assembled so as to form a solid rectangle.

15. (original) The combination of claim 14, further comprising at least one additional semiconductor die assembled to the outside of said solid rectangle, said additional semiconductor die having electrical connections to at least one of said dies in said solid rectangle.

16. (currently amended) The combination of claim 13, wherein said wiring substrates have openings ~~opening~~ therein to facilitate management of heat.

17. (original) A semiconductor die comprising:

a planar semiconductor member; and

a plurality of first electrically conductive pins formed on a surface of said semiconductor member, said pins having portions extending along a side of said semiconductor member.

18. (original) The semiconductor member of claim 17, in combination with:

a second semiconductor member having second electrically conductive pins formed on a surface of said second semiconductor member, said second pins having portions extending along a side of said second semiconductor member, at least a portion of said first pins and said second pins being disposed on said semiconductor members so as to align with one another when said semiconductor members are placed in close proximity to one

another, so that electrical contact between respective ones of said first pins and said second pins is facilitated.

19. (original) The combination of claim 18, further comprising at least one additional semiconductor member, said additional semiconductor member having additional pins, said additional pins having portions extending along a side of said additional semiconductor member, said additional pins being disposed on said additional semiconductor member so as to align with additional pins on an additional side of said first semiconductor member or said second semiconductor member when said additional semiconductor member is placed in close proximity to said first semiconductor member or said second semiconductor, so that electrical contact between respective ones of said additional pins and said first pins or second pins is facilitated.

20. (original) The combination of claim 19, wherein said semiconductor members are disposed so as to be coplanar.

21. (original) A semiconductor die substrate comprising:

a planar semiconductor member, said member having a plurality of micro-cups formed on a surface thereof, at least a portion of said micro-cups being sized, shaped and positioned so as to receive micro-pins.

22. (original) The semiconductor die of claim 21, in combination with:

a second semiconductor die, said second semiconductor die comprising:

a planar semiconductor member;

a plurality of conductive micro-pins extending from said semiconductor member in a direction parallel to a plane of said semiconductor member,

said micro-pins being received in said micro-cups.

23. (original) The combination of claim 22, wherein said semiconductor die substrate and said second semiconductor die are perpendicular to one another.

24. (original) The combination of claim 22, further comprising at least one bracket member, said bracket member having a first surface in contact with said semiconductor die substrate and a second surface in contact with said second semiconductor die.

25. (original) The combination of claim 22, further comprising an adhesive material disposed between said semiconductor members to facilitate said semiconductor members being secured to one another.

26. (original) A method for forming a semiconductor die, comprising:

forming a trench in a surface of said die;

filing the trench with a sacrificial material;

patterning said die to form a series of channels extending substantially perpendicularly to said trench;

depositing a conductive material in said channels;

removing at least a portion of the sacrificial material; and

removing portions of said die under said trench so as to separate a portion of said die on one side of said trench from a portion on another side of said trench.

27. (original) The method of claim 26, further comprising:

patterning said sacrificial material so that said channels extend so as to be partially in a portion of said die and partially a portion of said sacrificial material.

28. (original) The method of claim 26, wherein said sacrificial material is patterned to a depth greater than said die.

29. (original) The method of claim 26, wherein said removing is performed by grinding or etching of said die.

30. (original) The method of claim 26, wherein said die is part of a wafer having a plurality of dies, and said trench is a dicing lane of said wafer.

31. (original) The method of claim 26, wherein said sacrificial material is a polymer.

32. (original) The method of claim 26, wherein said sacrificial material is a photoresist.

33. (original) The method of claim 26, wherein said conductive material is one of a metal, a conductive paste, and a solder.

34. (original) The method of claim 26, further comprising depositing an adhesion layer in said channels prior to depositing said conductive material.

35. (original) The method of claim 34, wherein said adhesion layer is formed of a polymer and a silicon oxide.

36. (original) A method for forming a semiconductor die, comprising:

forming a trench in a surface of said die;

filing the trench with a sacrificial material;

patterning said die to form a series of channels extending substantially perpendicularly to said trench;

depositing a conductive material in said channels;

removing portions of said die under said trench; and

removing at least a portion of the sacrificial material so as to separate a portion of said die on one side of said trench from a portion on another side of said trench.

37. (original) A method of forming substrates with at least one micro-cup, comprising:

forming at least one via in the substrate;

coating said at least one via with a conductive material or a conductive and adhesive material to form said micro-cup; and

coating adhesive material on the substrate to facilitate attachment of a device having at least one pin, said at least one pin being sized, shaped and positioned to be received in a respective one of said at least one via.

38. (original) The method of claim 37, further comprising assembling said device to said substrate.

39. (new) The method of claim 26, wherein said conductive material forms a plurality of conductive pins extending from said semiconductor die in a direction parallel to a plane of said semiconductor die.

40. (new) The method of claim 39, wherein said semiconductor die has a plurality of sides, and wherein said pins extend from at least one of said sides.

41. (new) The method of claim 39, wherein said pins are micro-pins having a of length of 1 to 1000 microns, a width of 1 to 500 microns and a depth of 1 to 800 microns in the direction into the die.

42. (new) The method of claim 39, wherein said semiconductor die has a plurality of sides, and wherein said pins extend along said sides in a direction perpendicular to a plane of said semiconductor die.

43. (new) The method of claim 39, further comprising:

assembling said die to a substrate in which a series of openings has been formed, said openings being sized and spaced so as to receive said pins, so that said pins are received in said openings; and

securing said die to said substrate.

44. (new) The method of claim 43, wherein said securing of said die is performed by providing an adhesive between contacting surfaces of said die and said substrate.

45. (new) The method of claim 39, further comprising:

providing an additional die with said pins: and

assembling said pins of said respective dies to one another so that at least some pins of said dies are in electrical contact with a pin of the other of said dies.